

Amendments to the claims:

The listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

1 -3. (cancelled)

4. (currently amended) ~~The nitride micro LED with high brightness according to claim 3,~~A nitride micro LED (Light Emitting Diode) with high brightness, comprising:

a plurality of micro-sized luminous pillars having an n-type GaN layer formed on a substrate, an active layer 3 formed on the n-type GaN layer, and a p-type GaN layer formed on the active layer;

a gap filling material filled between the luminous pillars to have substantially the same height as the luminous pillars, wherein the gap filling material includes at least one selected from SiO₂, Si₃N₄, or a combination thereof, polyamide, and ZrO₂/SiO₂ or HfO₂/SiO₂ and wherein the gap filling material is formed to have substantially the same height as the luminous pillars through a CMP (Chemical Mechanical Polishing) process;

a p-type transparent electrode formed on a top surface of the gap filling material and the luminous pillars;

a p-type electrode formed on the p-type transparent electrode;

an n-type electrode electrically connected to the n-type GaN layer, wherein an array of the luminous pillars is driven at the same time; and

wherein a top surface of the p-type GaN layer of the luminous pillars has convex surfaces formed through the CMP process.

5. (cancelled)

6. (currently amended) ~~The nitride micro LED with high brightness according to claim 1,~~
~~further comprising~~ A nitride micro LED (Light Emitting Diode) with high brightness,
comprising:

a plurality of micro-sized luminous pillars having an n-type GaN layer formed on a
substrate, an active layer 3 formed on the n-type GaN layer, and a p-type GaN layer formed
on the active layer;

a gap filling material filled between the luminous pillars to have substantially the
same height as the luminous pillars;

a p-type transparent electrode formed on a top surface of the gap filling material and
the luminous pillars;

a pair of DBR (Distributed Bragg Reflectors) layers formed on a top surface of the
transparent electrode and a bottom surface of the substrate, respectively;

a p-type electrode formed on the p-type transparent electrode; and
an n-type electrode electrically connected to the n-type GaN layer, wherein an array
of the luminous pillars is driven at the same time.

7 - 8. (cancelled)

9. (currently amended) ~~The nitride micro LED with high brightness according to claim 8, further comprising~~ A nitride micro LED (Light Emitting Diode) with high brightness, comprising:

a plurality of micro-sized luminous pillars having an n-type GaN layer formed on a substrate, an active layer formed on the n-type GaN layer, and a p-type GaN layer formed on the active layer, wherein the luminous pillars have side surfaces that are formed obliquely;

a gap filling material filled between the luminous pillars to have substantially the same height as the luminous pillars;

a DBR layer made of ZrO_2/SiO_2 or HfO_2/SiO_2 and formed below the gap filling material within gaps between the luminous pillars;

a p-type transparent electrode formed on a top surface of the gap filling material and the luminous pillars;

a p-type electrode formed on the p-type transparent electrode;

an n-type electrode electrically connected to the n-type GaN layer, wherein an array of the luminous pillars is driven at the same time.

10 – 23. (cancelled)